

CLAIMS

What is claimed is:

1 1. A method for servo track writing comprising:
2 coupling a reference disk and a copy disk to a spindle
3 motor of a servo track writer;
4 reading the reference disk with a read head of the servo
5 track writer, said reference disk having a plurality of tracks
6 containing servo information; and,
7 writing said servo information onto a copy disk using a
8 write head of said servo track writer before said copy disk is
9 incorporated into a hard disk drive assembly.

1 2. The method of claim 1 wherein reading the reference
2 disk comprises performing a track following operation, where
3 said track following operation comprises:
4 positioning said read head at a first track on said
5 reference disk;
6 following at least a portion of said first track with
7 said read head, said reference disk to be rotated using a
8 fluid dynamic bearing spindle;
9 determining a position error signal for said read head;
10 correcting a position of said read head using said
11 position error signal; and,
12 reading servo information from at least said portion
13 using said read head.

1 3. The method of claim 1 further comprising rotating
2 said reference disk and said copy disk using a fluid dynamic
3 bearing spindle.

1 4. The method of claim 1 wherein writing said servo
2 information to the disk comprises writing a plurality of burst
3 signals to the disk, said burst signals to be read by a drive
4 head of said hard disk drive assembly to determine a position
5 of said drive head.

1 5. The method of claim 1 wherein reading the reference
2 disk comprises reading the reference disk with a read head of
3 the servo track writer where said reference disk is encoded
4 with a phase modulated servo pattern.

1 6. The method of claim 1 wherein reading the reference
2 disk comprises reading the reference disk with a read head of
3 the servo track writer where said servo information is
4 recorded onto said reference disk using an offline servo track
5 writer.

1 7. The method of claim 1 further comprising
2 incorporating said copy disk into a disk stack of said hard
3 disk drive assembly, copying at least a portion of said servo
4 information onto a blank disk that is on said disk stack, and
5 using said servo information to determine a position of a
6 drive head of said hard disk drive assembly.

1 8. The method of claim 1 wherein writing said servo
2 information onto said copy disk comprises writing said servo
3 information onto said copy disk where said servo information
4 and said disk copy are to be used in a dedicated servo system.

1 9. A servo track writer comprising:
2 an actuator having a plurality of actuator arms;
3 a read head connected to one of said actuator arms;
4 a write head connected to another of said actuator arms;
5 a chuck to secure a reference disk and a copy disk onto a
6 spindle, said spindle to rotate said reference disk and said
7 copy disk; and,
8 a controller to:
9 read the reference disk with said read head, said
10 reference disk to include a plurality of tracks containing
11 servo information; and,

12 write said servo information onto said copy disk using
13 said write head before incorporating said copy disk into a
14 hard disk drive assembly.

1 10. The servo track writer of claim 9 wherein said
2 controller further is to:

3 position said read head at a first track on said
4 reference disk;

5 follow at least a portion of said first track with said
6 read head;

7 determine a position error signal for said read head;

8 correct a position of said read head using said position
9 error signal; and

10 read said servo information from at least said portion
11 using said read head.

1 11. The servo track writer of claim 10 further
2 comprising a plurality of copy disks and a plurality of write
3 heads associated therewith.

1 12. The servo track writer of claim 10 wherein said
2 servo information is to be stored in memory before being
3 written to said copy disk.

1 13. The servo track writer of claim 9 wherein said
2 spindle comprises a fluid dynamic bearing spindle.

1 14. The servo track writer of claim 9, wherein said
2 reference disk is encoded with a phase modulated servo
3 pattern.

1 15. The servo track writer of claim 9, wherein said
2 servo information is recorded onto said reference disk using
3 an offline servo track writer.

1 16. The servo track writer of claim 9 wherein said copy
2 disk is to be incorporated into a disk stack of a hard disk
3 drive assembly after said servo information has been written
4 onto said copy disk, said servo information on said copy disk
5 to be used to determine a position of a drive head in said
6 hard disk drive assembly where said hard disk drive assembly
7 utilizes a dedicated servo system.

1 17. The servo track writer of claim 9, wherein said copy
2 disks are to be incorporated into a disk stack of a hard disk
3 drive assembly after said servo information has been written

4 onto said copy disk, said servo information on said copy disk
5 to be copied onto a blank disk in said hard disk drive
6 assembly where said hard disk drive assembly utilizes an
7 embedded sector servo system.

1 18. A servo track writer comprising:
2 an actuator having a plurality of actuator arms and heads
3 attached thereto;
4 spindle means to rotate a reference disk and a copy disk,
5 said reference disk to contain a plurality of tracks having
6 servo information to be read by at least one of said heads;
7 means to secure said reference disk and said copy disk to
8 said spindle means;
9 means to perform a track following operation on said
10 reference disk;
11 means to write said servo information onto said copy disk
12 before said copy disk is incorporated into a hard disk drive
13 assembly.

1 19. The servo track writer of claim 18 wherein said
2 means to perform the track following operation comprises:
3 means for positioning a first head on a track on said
4 reference disk;
5 means for following at least a portion of said track with
6 said first head;

7 means for determining a position error signal for said
8 first head;
9 means for correcting a position of said first head using
10 said position error signal; and
11 means for reading said servo information from at least
12 said portion with said first head.

1 20. The servo track writer of claim 18, further
2 comprising means for incorporating said copy disk into said
3 hard disk drive assembly, said copy disk to contain said servo
4 information copied from said reference disk.

1 21. A servo track writer comprising:
2 an actuator having a plurality of actuator arms;
3 a read head connected to one of said actuator arms;
4 a write head connected to another of said actuator arms;
5 and,

6 a fluid dynamic bearing spindle, said fluid dynamic
7 bearing spindle to rotate a reference disk and a copy disk in
8 a servo track writing operation.

9 a chuck to secure the reference disk and the servo-copy
10 disk to said fluid dynamic bearing spindle.

11 a controller to:
12 perform a track following operation on said reference
13 disk, said reference disk to include a plurality of tracks

14 containing servo information to be read by said read head;
15 and,
16 write said servo information onto said copy disk using
17 said write head before incorporating said copy disk into a
18 hard disk drive assembly.

1 22. The servo track writer of claim 21 wherein said
2 track following operation comprises:
3 positioning said read head at a first track on said
4 reference disk;
5 following at least a portion of said first track with
6 said read head;
7 determining a position error signal for said read head;
8 correcting a position of said read head using said
9 position error signal; and
10 reading said servo information from at least said portion
11 using said read head.

1 23. The servo track writer of claim 21 further
2 comprising a plurality of copy disks each having a head
3 associated therewith capable of writing information to said
4 copy disks.

1 24. The servo track writer of claim 21 wherein said copy
2 disk is to be incorporated into a disk stack of a hard disk
3 drive assembly after said servo information has been written
4 onto said copy disk, said servo information on said copy disk
5 to be used to determine a position of a drive head of said
6 hard disk drive assembly where said hard disk drive assembly
7 utilizes a dedicated servo system.

1 25. The servo track writer of claim 21, wherein said
2 copy disks are to be incorporated into a disk stack of a hard
3 disk drive assembly after said servo information has been
4 written onto said copy disk, said servo information on said
5 copy disk to be copied onto a blank disk in said hard disk
6 drive assembly where said hard disk drive assembly utilizes an
7 embedded sector servo system.

1 26. The servo track writer of claim 21, wherein said
2 fluid dynamic bearing spindle is an oil bearing spindle.